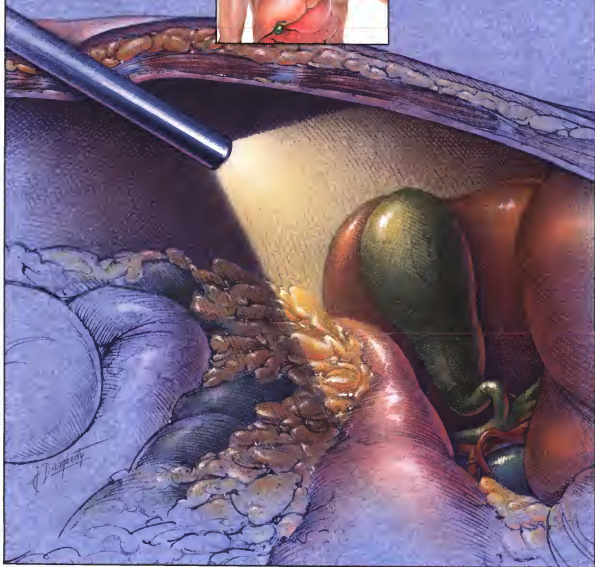


# LAPAROSCOPIC GALLBLADDER SURGERY



# The Cause of Your Pain

Gallbladder problems can cause many distressing symptoms. You may have felt severe stomach pain, shoulder pain, back pain, pain under your breastbone, heartburn, or an upset stomach. Symptoms may have started sometime after a meal. This may have been the first attack. Or you may have had other attacks in the past. Now your doctor may be saying your pain is due to **gallstones**. These are linked to a diseased gallbladder. Because your symptoms are likely to worsen if not treated, you should think about the options for relieving your pain.

## Who Develops Gallbladder Problems?

No one knows for sure why some people have gallbladder problems. These problems may be related to how the body handles cholesterol. Or problems may result from an infected gallbladder. People more likely to have gallstones include:

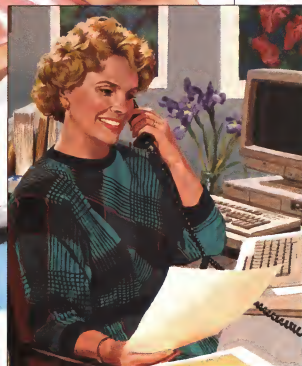
- Women, often in their 40s.
- Women who have been pregnant.
- Men and women who are overweight. (But losing weight too quickly may increase the risk of forming stones.)
- Parents, siblings, and children of people with gallbladder problems.

## Certain Foods Can Make Your Problems Worse

If you have gallbladder problems, it's best to avoid fatty or spicy foods. Eating these can trigger pain or other symptoms. So before your gallbladder problems are treated, stay away from fried foods, oils, high-fat dairy products, and spicy or peppery meals.

This booklet is not intended as a substitute for professional medical care. Only your doctor can diagnose and treat a medical problem.

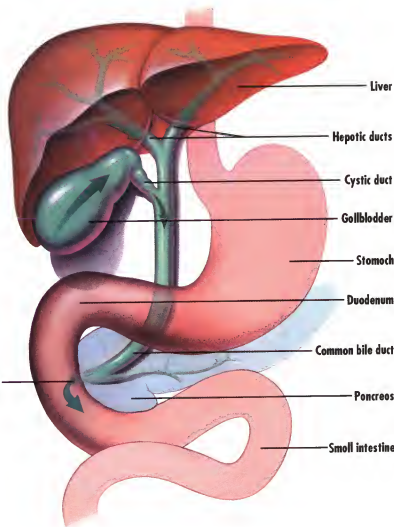
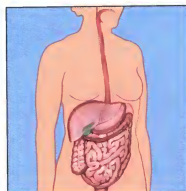
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Laparoscopic surgery may help you resume your normal activities, often in a few days after surgery.

# Gallbladder Anatomy

The gallbladder's job is to store and release bile, a fluid made by the liver. Bile breaks down fats in the foods you eat and helps digestion. Usually, bile moves smoothly from the gallbladder into the rest of your digestive system. If gallstones form in the gallbladder, the stones can block the release of bile. This can cause pain and, in some cases, serious problems.



## The Normal Gallbladder

The gallbladder is a small, sac-like, pear-shaped organ. It sits under the liver in the upper-right part of the abdomen. The liver makes bile, a fluid that breaks down fats in foods to aid digestion. Some of this bile is stored in the gallbladder. The gallbladder also concentrates the bile by removing water. After a fatty meal, the gallbladder squeezes bile through ducts into the small intestine. If a diseased gallbladder is removed, the liver still makes bile to aid digestion.

## How Bile Aids Digestion



Your liver makes bile. It sends the bile to other parts of your digestive system through the hepatic and common bile ducts. Most bile is sent to the duodenum (the first part of the small intestine). But some bile is sent to the gallbladder.



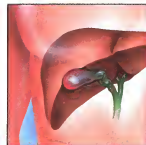
Your gallbladder stores a small amount of bile until it's needed for digestion. Bile passes in and out of the gallbladder through the cystic duct.



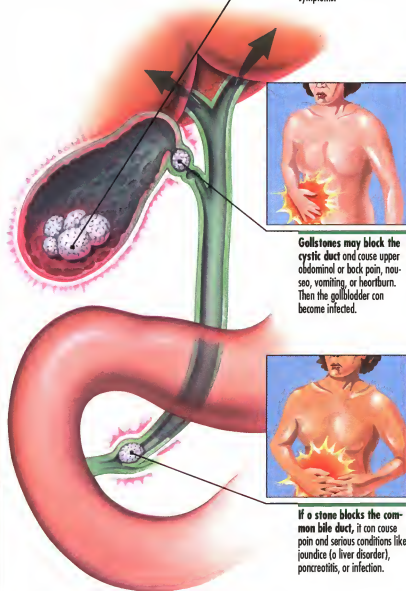
Hormones (chemicals made by the body) signal the gallbladder to release bile after a fatty meal. Bile and food mix in the duodenum. The pancreas adds digestive juices. Digestion continues in the small intestine.

## Gallstones: The Most Common Gallbladder Problem

Sometimes there may be too much or too little of the bile or other liquid chemicals inside the gallbladder. When this happens, some of the chemicals **crystallize** (become solid) and form **gallstones**. If the stones stay in the gallbladder, they may not cause problems. But if they move into and block ducts, bile can back up. This may lead to pain, nausea, infections, or diseases of the liver. It may also lead to **pancreatitis** (an inflamed pancreas).



Gallstones may irritate the gallbladder wall, or they may be "silent" and cause no symptoms.



If a stone blocks the common bile duct, it can cause pain and serious conditions like jaundice (a liver disorder), pancreatitis, or infection.



# Evaluating Your Condition

Your doctor will take your medical history and examine you. You may also have some tests. These tests help your doctor find out if you have a problem with your gallbladder. They may show if you have gallstones, and where the stones are located. After your evaluation, your doctor will suggest a treatment plan that's best for you.

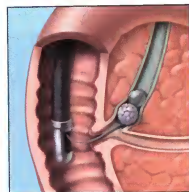
## Medical History and Physical Exam

Your doctor will ask you about your symptoms, health problems, and other factors that may point to gallbladder disease. You'll also have a physical exam. This will help your doctor rule out other causes for your pain.

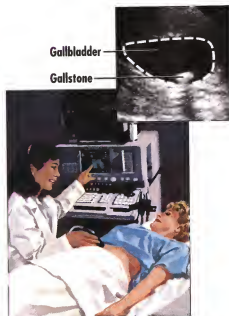
## Diagnostic Tests

Your doctor may suggest one or more of these tests:

- **Ultrasound** uses painless sound waves to scan your abdomen for gallstones.
- **Blood tests** can suggest stones in your bile duct.
- **Imaging tests** such as **CT** (computerized tomography), a **HIDA** (hepatobiliary) scan, an **oral cholecystogram**, or an **ERCP** (endoscopic retrograde cholangiopancreatography) can produce images of your gallbladder.

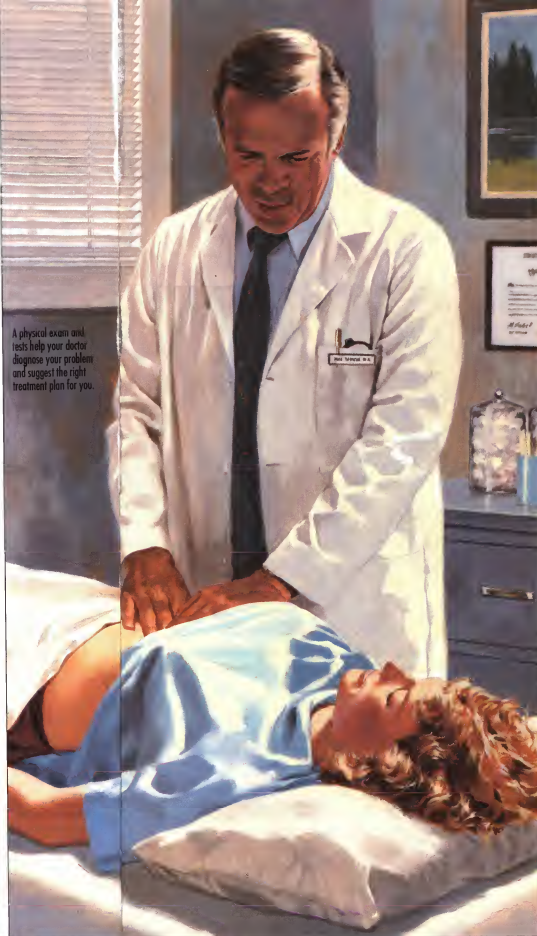


During **ERCP**, an endoscope (small flexible telescope) is used to reveal and sometimes remove gallstones from the bile duct. A balloon at the tip of a catheter opens above the stone. The stone is gently pulled out of the duct. The stone passes through your digestive tract and leaves your body through stool.



**Ultrasound** can show the presence of gallstones.

A physical exam and tests help your doctor diagnose your problem and suggest the right treatment plan for you.



## Treatment Plan

You can live a healthy life without your gallbladder. So your doctor may suggest surgery to remove it. You and your doctor will discuss your options, including risks and complications of surgery. Many people can have laparoscopic cholecystectomy instead of open surgery. But it may not be right for you if:

- You have major scarring from a past surgery.
- You have any bleeding disorders.
- You are pregnant and near your due date.
- You have a condition that will make it hard for your doctor to see with the laparoscope.

## Risks and Complications

Any surgery has some risks and complications. For gallbladder surgery, they include:

- Bleeding
- Infection
- Injury to surrounding organs
- Injury to the common bile duct
- Blood clots
- Indigestion
- Neuroma (painful spot) or numbness near the incision
- Continued formation of stones in the common bile duct

# Your Surgical Experience

With laparoscopic cholecystectomy, only a short hospital stay is usually needed. Your surgery is performed through several small incisions. The laparoscope is inserted through one incision. One end of the scope shines light inside your body. The other is attached to a tiny camera. The camera lets your doctor view your gallbladder. Your doctor inserts special instruments through other small incisions. Then your gallbladder is removed through a small incision near your navel. The surgery may take from 1 to 2 hours.

## Before Surgery

These are some of the ways you may need to prepare for surgery:

- Stop eating fatty or spicy foods.
- Have routine blood tests and other tests done.
- Meet with an anesthesiologist to discuss the anesthesia to be used.
- Don't eat or drink anything (even water) after midnight the night before surgery.
- Tell your doctor about prescription or over-the-counter medications you take, including aspirin, blood thinners, or herbal remedies. Ask if you should stop taking them before surgery.
- Arrange to have someone drive you home after surgery.
- Check with your doctor for other instructions.



A camera on the end of the laparoscope lets your doctor see your gallbladder and the surrounding tissues on a video screen.

## During Laparoscopic Surgery

First, you're given an anesthetic and medications through an IV (intravenous) tube. Your abdomen is then inflated with carbon dioxide gas. This helps your doctor to see and move instruments inside your body. The gas is removed at the end of surgery.

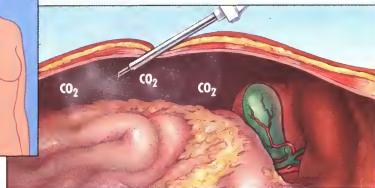
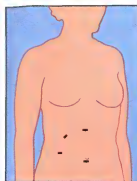
### Cholangiogram

During surgery, a **cholangiogram** (a special type of x-ray) may be taken of your bile duct. The x-ray may reveal stones in the duct. Stones may be removed at this time or during an ERCP.

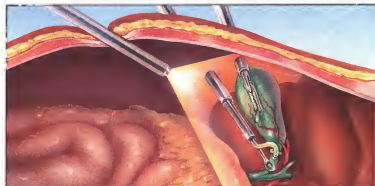
### Open Surgery

In rare cases, your doctor may feel it isn't safe to continue a laparoscopic cholecystectomy once it has begun. If so, your gallbladder is removed through a larger incision in your abdomen.

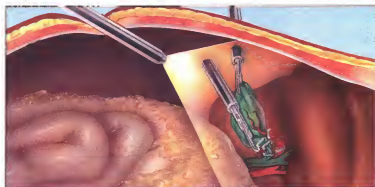
## Laparoscopic incision sites



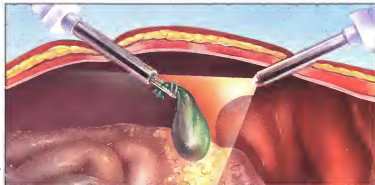
Carbon dioxide gas is injected to lift the outer tissue layers away from the internal organs. The laparoscope is then inserted through an incision made near your navel.



A cholangiogram catheter may be inserted through another incision. This catheter takes an x-ray of the common bile duct to check for stones.



Tiny metal clips are used to close off the duct and blood vessel at the base of the gallbladder. These clips stay in your body and are harmless. Your gallbladder may be detached from your liver using cautery (electric current).



The gallbladder is lifted so it's near an incision. Fluid and other contents inside the gallbladder are then taken out. The gallbladder is now the size of a deflated balloon and can be removed through a small incision near your navel.

# Recovering After Surgery

Most people having laparoscopic surgery go home the same day and recover in less than a week. The incisions are small and no muscles are cut. So, there's less pain than after open surgery. As your digestive system adjusts, you can eat normally. Be sure to call your doctor if you have problems after surgery.

## In the Hospital

When you wake up after surgery, you'll find small bandages covering your incisions. The IV tube may stay in place briefly, until you can drink fluids. You may have some discomfort in your right shoulder for a short time. This will go away by itself. Within a few hours after your surgery, you may be drinking liquids. You may be able to eat a light meal later that evening if you wish.



## Speeding Recovery

Your nurses are likely to ask you to cough and to breathe deeply to keep your lungs clear. You'll also be asked to take short walks several hours after surgery. This keeps your blood moving smoothly to prevent blood clots from forming.

## At Home

When you return home, you can do things to speed your recovery. Take your temperature often during the first 2 to 3 days to be sure you don't have a fever. Don't do any heavy lifting or vigorous exercise. Follow your doctor's advice about showering, driving, and returning to work. You may be able to resume some normal activities in 3 to 5 days. Be aware that pain medicines can cause short-term changes in bowel habits, such as constipation. Bruising near the incision site is normal.

## Eating Normally Again

You may have some gas pains or other discomfort while your digestion returns to normal. During this short time, eat whatever was easy to digest before your surgery.

## Following Up

During the first 7 to 10 days after surgery, your doctor will meet with you to check your progress and answer your questions. If you have any stitches, they may be removed. More appointments will be scheduled as needed.

## Call Your Doctor If...

- You have fever (over 101°F or 38.3°C) or chills.
- You have an incision that drains for longer than a day.
- You have increasing pain or redness at an incision site.



You can help yourself during the short recovery period by taking your temperature. Also, keep your doctor appointments, and return gradually to your normal activities and diet.



# Feeling Good Again

Gallbladder removal is one of the most successful kinds of surgery. Laparoscopic gallbladder removal is often the best way to stop your pain when gallstones are the problem. Best of all, you should still be able to live a full and healthy life without your gallbladder. This includes eating the foods and doing the things you enjoyed before your gallbladder problems started.

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